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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/018,596      | 03/14/2002  | Gerhard Rinninger    | 15028               | 8380             |

7590 11/18/2003

Scully Scott Murphy & Presser  
400 Garden City Plaza  
Garden City, NY 11530

EXAMINER

RODRIGUEZ, WILLIAM H

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3746

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/018,596

**Applicant(s)**

RINNINGER ET AL.

**Examiner**

William H. Rodriguez

**Art Unit**

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

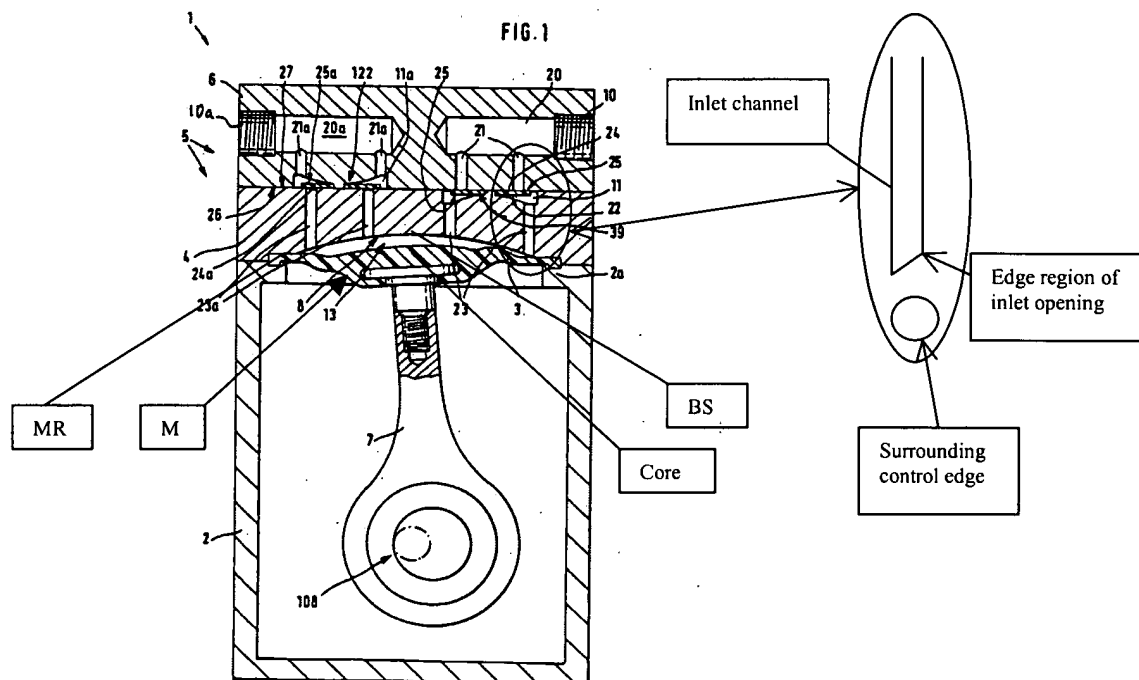
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

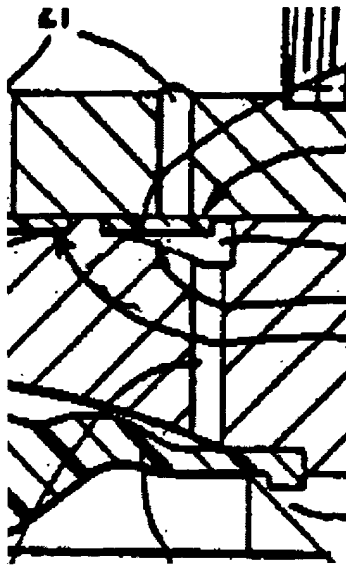
### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.





With respect to claim 19, **Becker et al.** teach a pump having a membrane M actuated by a crank drive, said membrane bounding in conjunction with a concave pump body surface BS, a pump chamber 13, an inlet channel 21, 23 and an outlet channel 24a, 23a which open to respectively an inlet opening and an outlet opening in the pump body surface, said membrane having a membrane core and an elastically deformable membrane ring MR, said membrane core having a convex surface, which is conformed to the pump body surface, said inlet opening being arranged in a region of the pump body surface which the membrane initially approaches during an expulsion stroke of the crank drive and wherein the elastically deformable membrane ring closes the inlet opening before the reaching of top dead center of the crank drive, and wherein an inlet valve 24 is provided which is arranged in the region of the inlet opening of the inlet channel, characterized in that in an edge region of the inlet opening, there is formed a surrounding control edge against which the elastically deformable membrane ring bears so as to close the inlet valve. See particularly **Figure 1**.

With respect to claim 20, **Becker et al.** teach that the inlet valve 24 includes a valve plate which covers over the inlet opening.

With respect to claim 21, **Becker et al.** teach that the middle point of the inlet opening is located at least approximately in the plane of rotation of the crank of the crank drive. See particularly **Figure 1**.

With respect to claim 24, **Becker et al.** teach that the middle axis of the inlet channel is orientated perpendicularly to the pump body surface. See particularly **Figure 1**.

With respect to claim 25, **Becker et al.** teach that the outlet opening of the outlet channel is arranged in a region of the pump body surface which is last approached by the membrane and which is reached earliest by the membrane at the top dead center of the crank drive. See particularly **Figure 1**.

With respect to claim 26, **Becker et al.** teach that the middle point of the outlet opening of the outlet channel is arranged in an inner region of the pump body surface 4 which is located opposite to the membrane core of the membrane 2. See particularly **Figure 1**.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Becker et al. (U.S. 5,275,541)** in view of **Becker (U.S. 3,947,156)**.

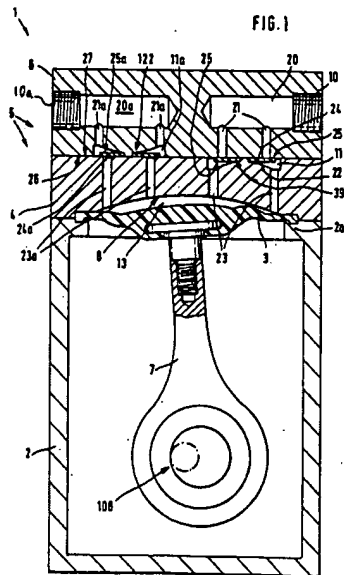
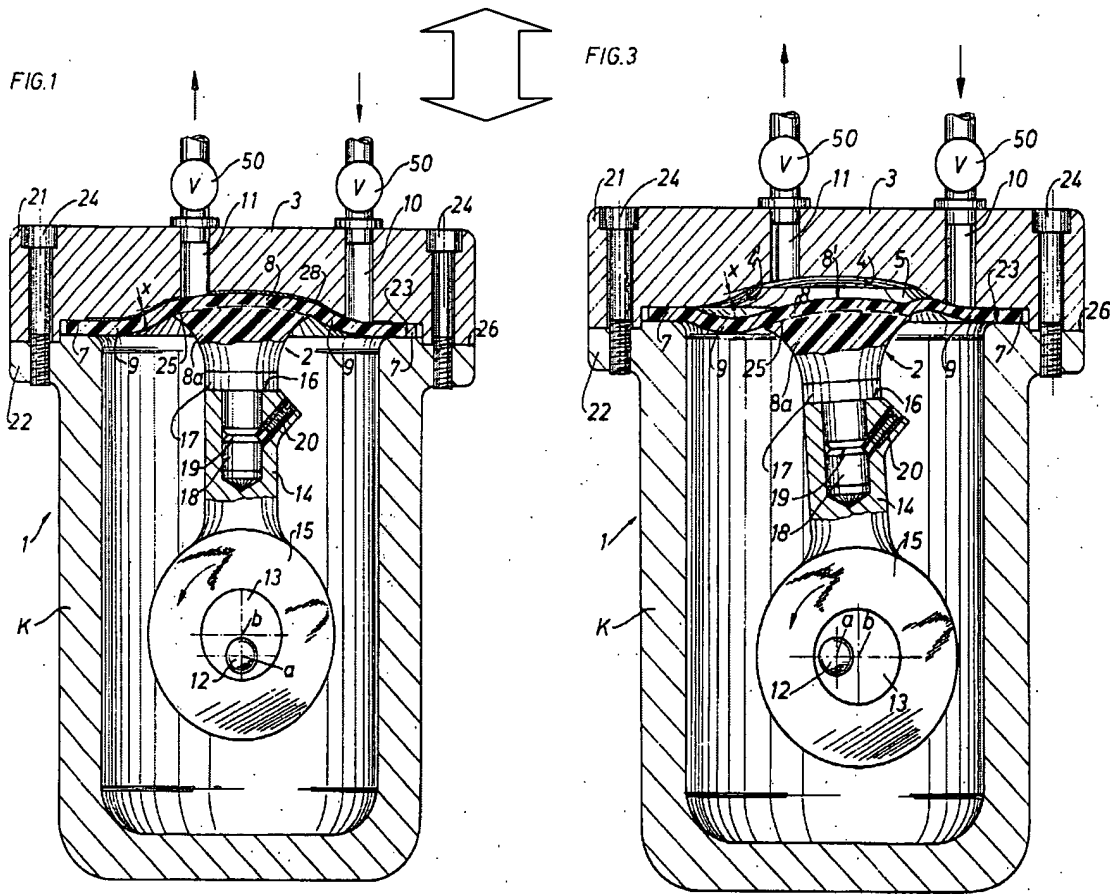


Fig. 1 of Becker et al. ('541)



Figs. 1 and 3 of Becker ('156)

With respect to claims 22 and 23, **Becker et al. ('541)** do not schematically show that the elastically deformable membrane ring closes the inlet opening at a rotary cranking position of the crank drive which is at an angle of up to 90 degrees or within the range of about 20 degrees to 90 degrees before top dead center. However, Becker ('156) teaches a similar apparatus to Becker et al. ('541). Further, Figures 1 and 3 of Becker ('156) teach that it is obvious if not inherent that the that the elastically deformable membrane ring closes the inlet opening at a rotary cranking position of the crank drive which is at an angle of up to 90 degrees or within the range of about 20 degrees to 90 degrees before top dead center. Notice that **Figure 1** is the TDC position while **Figure 3** is 90 degrees before TDC. To see this, refer to the location of the axes **a** and **b** corresponding to elements 12 and 13 respectively. As you can see from **Figure 3**, axis **a** and **b** are 90 degrees before TDC. See particularly **Figures 1, 3 of Becker; Figure 1 of Becker et al.** and compare the location of elements **a** and **b**.

### ***Response to Arguments***

3. Applicant's arguments filed 10/23/03 have been fully considered but they are not persuasive because of the following reasons.

On page 7 last paragraph of the response, applicant argues with regards to the reference Becker et al. ('541) "*the inlet and outlet channels extend directly into the pumping chamber without having an edge surrounding the region where the channels reach into the chamber as in the present invention*". Examiner disagrees because Becker ('541) does teach that the inlet and outlet channels have an edge (area surrounding opening) surrounding the region where the



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channels reach into the chamber as in the present invention. See **Figure 1** of Becker et al. ('541).

On page 8 first paragraph of the response, applicant argues with regards to the reference Becker et al. ('541) "*the valves are not closed by the diaphragm*". Examiner disagrees because Becker ('541) does teach that the inlet valves are closed when the diaphragm performs a compression stroke and the outlet valves are closed when the diaphragm performs a suction stroke. See **Figure 1** of Becker et al. ('541).

#### ***Remarks***

While the examiner recognizes the difference between the **Becker et al.** reference and the instant invention, the reference nonetheless reads on the claimed invention. The applicant is encouraged to consider adding the following limitation to independent claim 19 "wherein said surrounding control edge is formed as a recess inside the pump body surface and wherein said inlet valve is located at such recess". If this limitation is added to independent claim 19, the examiner would favorably consider the case for allowance upon a further search and verification that the specification provides antecedent basis for this or other limitation(s) added.

#### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

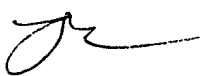
***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 703-605-1140. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine R Yu can be reached on 703-308-2675. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

W.R  
November 14, 2003

  
JUSTINE R. YU  
PRIMARY EXAMINER  
11/14/03